(Part 2, Vulnerable and Rare, Schedule 12, NSW National Parks and Wildlife Act, Interim Revised List 1992).

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REFERENCES

ALLISON, R. F., 1983. Hoary Bat. Pp. 334–35 in *The Australian Museum Complete Book of Australian Mammals* ed by R. Strahan. Angus and Robertson: Sydney.

HALL, L. AND RICHARDS, G. C., 1979. *Bats of Eastern Australia.* Queensland Museum Booklet **No. 12.** 66pp.

PARNABY, H., 1992. *An interim identification guide to bats of south eastern Australia.* Technical Reports of the Australian Museum. **No. 8.** 33pp.

RYAN, M. R., 1966. A new and some imperfectly known Australian *Chalinolobus* and the taxonomic status of African *Glauconycteris. J. Mammal.* **47:** 86–91.

VAN DEUSEN, H. M. AND KOOPMAN, K. F., 1971. Results of the Archbold Expeditions. No. 95. The genus *Chalinolobus* (Chiroptera, Vespertilionidae). Taxonomic review of *Chalinolobus picatus, C. nigrogriseus,* and *C. rogersi. Amer. Mus. Nov.* **No. 2468.** 1–30.

VAN DYCK, S. M. AND LONGMORE, N. W., 1991. Mammal Records. Pp. 284–336 in *An Atlas of Queensland's Frogs, Reptiles, Birds and Mammals* ed by G. J. Ingram and R. J. Raven. Queensland Museum: Brisbane.

The Mulgara, *Dasycercus cristicauda* (Krefft, 1867): a new dasyurid record for New South Wales

Murray Ellis

RZS Mammal Section, P.O. Box 20, Mosman 2088

Owls have evolved to be adept at capturing small, nocturnal mammals. Their habit of regurgitating pellets composed of fur and bone from their victims has left a convenient record of the fauna in different parts of the world (e.g., Smith 1977; Smith and Cole 1989; Clark and Bunck 1991). Such pellet deposits have been found at Mootwingee National Park north-east of Broken Hill, New South Wales (Ellis, Wilson and Hamilton 1991). This note is a further report on remains from that deposit.

The two known deposits at Mootwingee are located in rock overhangs in the quartzite/sandstone ridges running through the park. The roosts overlook areas of deep sands, loams and clays supporting chenopod shrublands and Acacia woodlands. Both sites have cracks in the floor of the roosts allowing material to fall through a series of crevices to lower ledges and caves, resulting in an unstratified accumulation of material consisting of both intact pellets and loose material from disintegrating pellets. Hundreds of bones have accumulated at each of the sites indicating that the ledges were used as long-term roosts by the birds.

Amongst the material from the site at the western side of the reserve three dentaries (Australian Museum registrations M27821 to M27823) that belong to a medium-sized species of dasyurid have so far been found. Two similar dentaries have also been found in the deposit from the eastern side of the park (Australian Museum registration M23090). Based on the features described by Smith and Medlin (1982), the distribution of teeth in the dentary and the morphology of the molars (Fig. 1), these jaws have been assigned to the Mulgara, *Dasycercus cristicauda*, rather than to the Kowari, *Dasyuroides byrnei.*

The Mulgara has not been reported alive in New South Wales. It is regarded as being more northern and western in its distribution (Fig. 2), but its remains have also been found in the Flinders Ranges (Smith and Medlin 1982) and further to the south and west than shown in Figure 2 (Morton and Baynes 1985). Based on the bones reported in this note, *Dasycercus cristicauda* was once an element in the fauna of the arid parts of the north-west of New South Wales. In fact, Calaby (1971), when referring

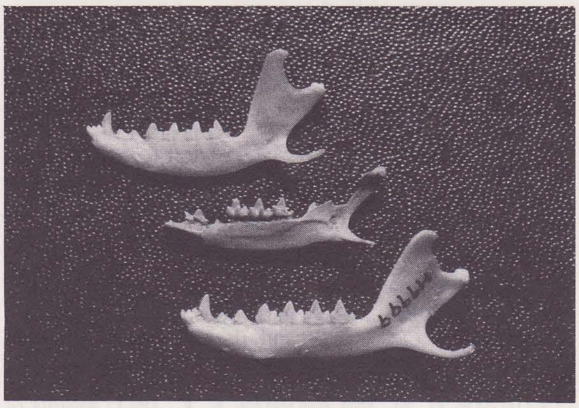

Figure 1. The dentary of the new record (centre) compared to reference material from the Australian Museum; *Dasycercus cristicauda* M9013 (above left) and *Dasyuroides byrnei* M9999 (lower right).

to an area of fossiled bone deposits approximately 150 km south of Mootwingee, stated "... a few (*Dasycercus, Caloprymnus* and *Largorchestes conspicillatus*) are known from farther inland or northwards but not necessarily from drier areas. We know so little of their distribution in early historical times that they may well have occurred in the Menindee area." Krefft (1866) did not find this species during his intensive survey of the junction of the Murray and Darling Rivers in 1856–57, suggesting that the Mulgara was restricted to the more inland parts of the state. The opportunistic collecting of the early explorers Sturt and Mitchell was not intensive or systematic enough in the north west of New South Wales to prove that the Mulgara no longer occurred there at the time of their journeys.

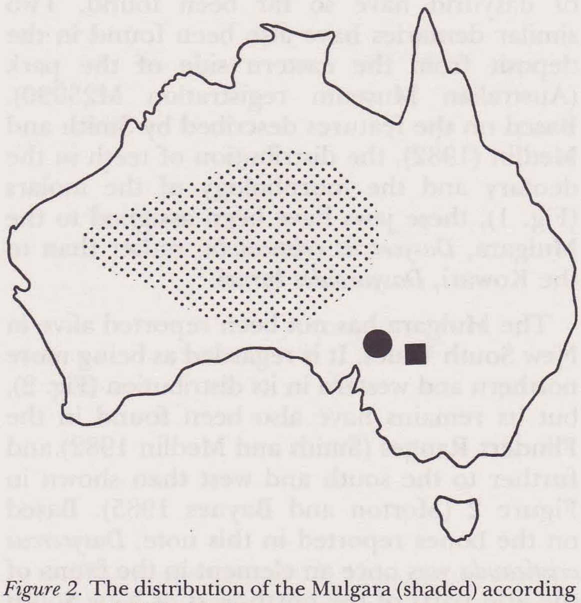

Figure 2. The distribution of the Mulgara (shaded) according to Strahan (1992) with the current records shown as a square and the Flinders Ranges record shown as a circle.

If the estimated age of these remains as 19th to 20th century (Ellis, Wilson and Hamilton 1991) is correct, then this is yet another species that has gone to extinction in New South Wales since European colonization of Australia. It also illustrates how greatly the original ranges of some species have been underestimated.

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REFERENCES

CALABY, J. H., 1971. Man, Fauna, and Climate in Aboriginal Australia. In *Aboriginal Man and Environment in Australia* ed by D. J. Mulvaney and J. Golson. Australian National University Press: Canberra.

CLARK, D. R AND BUNCK, C. M., 1991. Trends in North American small mammals found in Common Barn-owl *(Tyto alba)* dietary studies. *Can. J. Zool.* **69:** 3093–102.

ELLIS, M., WILSON, P. AND HAMILTON, S., 1991. The Golden Bandicoot, *Isoodon auratus* Ramsay 1887, in western New South Wales during European times. *Aust. Zool.* **27:** 36–37.

KREFFT, G., 1866. On the vertebrated animals of the lower Murray and Darling, their habits, economy and geographical distribution. *Trans. Phil. Soc. NSW* **1862–65:** 1–33.

MORTON, S. R. AND BAYNES, A., 1985. Small mammal assemblages in arid Australia: a reappraisal. *Aust. Mammal.* **8:** 159–69.

SMITH, J. D. B. AND COLE, J., 1989. Diet of the Barn Owl, *Tyto alba*, in the Tanami Desert, Northern Territory. *Aust. Wildl. Res.* **16:** 611–24.

SMITH, M. J., 1977. Remains of mammals, including *Notomys longicaudatus* (Gould) (Rodentia: Muridae), in owl pellets from the Flinders Ranges, South Australia. *Aust. Wildl. Res.* **4:** 158–70.

SMITH, M. J. AND MEDLIN, G. C., 1982. Dasyurids of the Northern Flinders Ranges before Pastoral Development. In *Carnivorous Marsupials* ed by M. Archer. Roy. Zool. Soc.: New South Wales, Sydney.

STRAHAN, R., 1992. *The Encyclopaedia of Australian Animals: Mammals.* Angus and Robertson: Sydney.

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